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ABSTRACT

This bibliography contains 23 annotations of resources in the ERIC database (ranging from 1985 to 1989) on helping students develop higher level and analytical skills, such as critical reading and thinking. The citations include instructional strategies for teaching visual literacy, religion, spelling, reading, semiotics, problem solving, literature and composition, metaphorical thinking, and home economics. Some references focus on particular groups, such as adolescents or at-risk students. (MS)

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Critical Reading and Thinking: Instructional Strategies

by Michael Shermis

Helping students develop higher-level and analytical skills, such as critical reading and thinking, can be a challenging undertaking. This *FAST Bib* provides a number of resources to help with that endeavor. A search of the ERIC database produced the following references from the period 1985 to 1989. The citations include instructional strategies for teaching visual literacy, religion, spelling, reading, semiotics, problem solving, literature and composition, metaphorical thinking, and home economics. Some focus on particular groups, such as adolescents or at-risk students.

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Activities to Promote Critical Thinking. Classroom Practices in Teaching English, 1986. National Council of Teachers of English, Urbana, IL, 1986. 158p. [ED 273 985]

Outlines ways to teach literature and composition that engage the students in such thinking processes as inferring, sequencing, predicting, classifying, problem solving, and synthesizing. The activities are divided into categories for composition, speaking and listening, literature study, additional creative and critical thinking activities, and speaking and writing across the curriculum.

Barwick, Joseph T. "Literature and Student Cognition." Paper presented at the 3rd Annual City Colleges of Chicago Literature Conference, 1988. 17p. [CS 211 594]

Asserts that an important task for literature teachers is to develop students' capacity for abstract thinking so that it can be employed on problems at will and by choice. The first process of abstract thinking is one which enables a person to see a connection between A and B, including processes of cause/effect, making analogies, or making comparisons. Another type of abstract thinking is that which enables a person to see a relationship between A and B that yields C, which uses inductive and deductive reasoning, and produces inferences and conclusions. The third and final type of abstract thinking is the process that enables a person to understand A so that what is learned can be applied elsewhere, enabling a person to generalize. The study of literature is particularly well-suited to teach this cognitive skill, because the purpose of literature is to transcend the narrow boundaries of the story and find some essential meaning for all of humanity. Teachers need to break down the concept of cognition into its component parts, in order to develop more effective strategies for teaching abstract thinking.

Borchardt, Donald A. "Confronting the Concrete and the Abstract in Critical Thinking." Paper presented at the Annual Meeting of the International Society for Exploring Teaching Alternatives, 1988. 12p. [CS 506 481]

States that the principles of synergy, the process by which one need or person combines optimally with another, can be applied to critical thinking in television broadcasting. Analysis of what one sees and hears on television, through questioning the abstract and concrete aspects of information, establishes a way to make the media problematic to students.

Carpenter, Donna. "The Original 'Fatal Attraction': Metaphorical Thinking and 'Medea,'" *English Journal*, v77 n8 p42-44 Dec 1988.

Stresses that metaphorical thinking encourages students to see relationships and requires them to use higher level critical thinking, particularly analysis and synthesis. Describes strategies to help students to think metaphorically in order to understand the elements of Greek tragedy.

Cianciolo, Patricia J. *Critical Thinking in the Study of Children's Literature in the Elementary Grades*, Elementary Subjects Center Series No. 5. Institute for Research on Teaching. Michigan State University, East Lansing, MI, 1988. 66p. [CS 211 653]

Explores some alternative ways to think about critical thinking in the study of literature in the elementary grades. Addresses the following topics: (1) the major factors influencing the trends in the literature curriculum in the elementary grades within the past 30 years; (2) substantive research focusing on critical thinking about children's literature, selection of materials for use in the teaching of critical thinking about literature, especially critical thinking about literature as art; and (3) literature programs originating from various sources, i.e., children's literature textbooks developed in colleges, or by state departments of education, and commercial children's literature programs. Argues that when literature is viewed as an art, students can study literature in its truest sense—that is, engage in critical thinking when interpreting and evaluating it.

Commeyras, Michelle. *Analyzing a Critical-Thinking Reading Lesson.* Technical Report No. 464. Bolt, Beranek and Newman, Inc., Cambridge, MA; Center for the Study of Reading, University of Illinois, Urbana, IL, 1989. 23p. [CS 009 580]

Analyzes the transcript of a critical-thinking reading lesson for sixth grade students to examine the interdependent relationship between critical thinking and reading comprehension, and to show critical thinking can be infused into classroom instruction using ordinary classroom materials (e.g. selections from a basal reading series).

Dilworth, Collett B. "Critical Thinking and the Experience of Literature." Paper presented at the 75th Annual Meeting of the National Council of Teachers of English, 1985. 13p. [ED 266 477]

Asserts that, despite the current emphasis on thinking skills and the resulting concentration on lists and taxonomies that do not succeed beyond research contexts, critical thought relies not on applying mental steps but on simply trying to figure out what might be right or wrong. This depends on one basic cognitive act, contrasting—directing one's initial thoughts to the crucial differences between things or to the distinctions that reveal essential characteristics. This thinking is necessary and natural in the study of literature because writers often use comparison and contrast in their writing, while readers must compare and contrast their understanding against the criterion of the text's assumed coherence. To help students enjoy literature's resonances (the relationships of such elements as images, characters, and circumstances), teachers must foster their critical perceptions and contrastive powers through recognizing and applying contrastive thought. Such critical thought can be taught by example, guided discussion, and independent writing, particularly through use of a divided reader's journal in which students paraphrase and quote contrastive parts of literature texts.

Goldstone, Bettep. "Visual Interpretation of Children's Books," *Reading Teacher*, v42 n8 p592-95 Apr 1989.

Examines how visual literacy (the ability to interpret the visual images of advertisements, illustrations, television, and other visual media) can promote creative and analytic thinking. Provides several instructional strategies to teach visual literacy through book illustrations. Notes that visual literacy is essential in a world increasingly dominated by visual messages.

Hepburn, Velma. "A Professor's Formula for Teaching Critical Thinking." 1989. 7p. [CS 009 539]

Presents a formula for writing critical thinking assignments on different academic levels which professors can use in training elementary and secondary educators and in developing critical thinkers. Includes lists of terminology, instructional materials, and assignments (at various academic levels) which may be combined into a variety of assignments.

"Higher Order Thinking Skills: A Catalog of Products, Publications, and Services." Southeastern

Educational Improvement Lab., Research Triangle Park, NC, 1989. 10p. [CS 009 524]

Lists and describes 31 products, publications, and services available from the nine regional educational laboratories funded by the Office of Educational Research and Improvement, United States Department of Education.

Jago, Carol. "Flotation Strategies for Sinking Students: Kids, Cops, and Communication," *English Journal*, v78 n2 p19-22 Feb 1989.

Presents a model for working with students at risk, helping them develop critical thinking, listening, reading, and writing skills.

Keating, Daniel. "Adolescents' Ability to Engage in Critical Thinking." National Center on Effective Secondary Schools, Madison, WI, 1988. 23p. [CS 009 423]

Presents several issues as central themes for the analysis of possible constraints on critical thinking among adolescents. First is the degree to which such thinking can more usefully be considered as a general ability, instead of necessarily being tied to specific domains of content knowledge. Second is whether the metaphor of "skill" is in fact the most appropriate one. Third is whether it is helpful to regard the various aspects of thinking as relatively more independent (and perhaps hierarchical) or more interdependent, even unitary. A synthesis of research supports the belief that fundamental developmental limitations are not a significant source of performance limitations for adolescents. An evaluation of current research suggests that the source of the limitations is more likely to be found in our educational practices. For a truly open, critical discourse, the recognition that knowledge is "problematic and tentative" is essential. This viewpoint, however, runs counter to the socially appointed authoritarian role that is imposed on teachers. Thus, a host of factors conspire to limit discourse, and discourse seems essential to the development of critical thinking and reasoning. Two routes to meeting this challenge are to study teachers who are able to create an effective classroom climate for discourse, despite the constraints; and to examine more closely the organizational and systemic factors which reinforce the current framework.

Mader, Thomas F.; Mader, Diane C. "The Language of Critical Thinking: Logical Exercises and Legal Cases for Use in the Speech Communication Classroom." Paper presented at the 79th Annual Meeting of the Eastern Communication Association, 1988. 26p. [ED 293 166]

Addresses two recurrent concerns in educational debate—how a discipline can contribute to students' analytical and critical thinking, and how to improve students' ability to express themselves orally and in writing. The Language of Critical Thinking course is designed to strengthen critical thinking skills by using a legal case study approach. This method allows students to concentrate on the analysis of issues, on the development, evaluation, and organization of arguments, and on perfecting a clear and effective style.

Marzano, Robert J. "Policy Constraints to the Teaching of Thinking." Mid-Continent Regional Educational Lab, Inc., Aurora, CO, 1988. 12p. [CS 009 511]

Reflects the growing agreement on a national and local level that direct instruction in higher order thinking skills should be a major educational focus. To satisfy this growing awareness and perceived need, a number of programs have been developed. Given the widespread interest in teaching thinking and the increasing number of programs to satisfy that interest, it could be assumed that the incidence of direct instruction in thinking at the classroom level would be rapidly increasing. However, the implementation of thinking skills programs appears to be a slow process, with many hurdles to overcome. A curriculum which included the teaching of thinking would necessarily have a balance among factual content objectives, metacognitive objectives, and cognitive objectives. Those in positions of authority at the local, state, and national levels should mandate that assessment techniques should not be comprised primarily of objective, quantitative measures. Instead, more holistic and qualitative measures must be legitimized within education. Finally, distinctions as to the domain of responsibility of educators versus non-educators must be established and articulated at all policy levels.

Neilsen, Allan R. *Critical Thinking and Reading: Empowering Learners to Think and Act.* Monograph on Critical Thinking Number 2. Monographs on Teaching Critical Thinking Series. ERIC Clearinghouse on Reading and Communication Skills, Bloomington, IN; National Council of Teachers of English, Urbana, IL, 1989. 54p. [CS 009 640]

Argues that the present educational system can do little to foster critical thought because it is rooted in a world view that sees thinking and reading as isolated "skills" that can be transmitted to learners via a teacher-centered pedagogy. Suggests that educators

consider a perspective from which reading and thinking are seen as critical attitudes or states-of-mind that help to shape one's daily life. Contends that this shift in perspective on thinking and reading must be accompanied by a shift to a more learner-centered pedagogy that provides students with opportunities and incentives to develop critical minds by engaging in projects that are of personal interest and consequence.

Norris, Stephen P. *Verbal Reports of Thinking and Multiple-Choice Critical Thinking Test Design.* Technical Report No. 447. Bolt, Beranek and Newman, Inc., Cambridge, MA; Center for the Study of Reading, Univeristy of Illinois, Urbana, IL, 1989. 28p. [CS 009 477]

Describes a methodology for using verbal reports of thinking to develop and validate multiple-choice tests of critical thinking. These verbal reports of individuals' thinking on draft items of multiple-choice critical thinking tests can be used systematically to provide evidence of the thinking processes elicited by such tests, and in this case were used to develop and validate a test of observation appraisal.

Rosebery, Ann S.; and others. "The Problem-Solving Processes of Writers and Readers." Occasional Paper No. 7. Center for the Study of Writing, Berkeley, CA; Center for the Study of Writing, Pittsburgh, PA, 1989. 30p. [CS 211 679]

Argues that while young children's problem-solving models are not as elaborate as those of older students, they share an important belief, namely, that writing and reading are fundamentally purposeful acts of communication. Focusing on the interpretation of process, in particular on writing and reading as forms of problem solving that are shaped by communicative purpose, three sets of vignettes show students at different stages of schooling as they write and read. They illustrate the nature of problem solving in skilled reading and writing processes that are held as goals for college students; place these processes in context by considering some of the factors that influence students' problem solving as they write and read in response to typical class assignments; and explore the problem-solving skills that young students--children learning to write and read and adolescents expanding their writing and reading abilities--bring to their school assignments.

Roth, Rita; Adler, Susan. "Critical Inquiry in Teacher Preparation." Paper presented at the 69th Annual Meeting of the American Educational Research Association, 1985. 38p. [ED 264 187]

Presents a case study of a recently reconceptualized teacher education program which has a critical inquiry base and an emphasis on "language across the curriculum." Describes the program's rationale, organization and practice, along with a description of the ongoing process of program development.

Siegel, Marjorie; Carey, Robert F. *Critical Thinking: A Semiotic Perspective.* Monograph on Critical Thinking Number 1. Monographs on Teaching Critical Thinking Series. ERIC Clearinghouse on Reading and Communication Skills, Bloomington, IN; National Council of Teachers of English, Urbana, IL, 1989. 55p. [CS 211 649]

Encourages teachers to consider the notion that thinking critically is a matter of reading signs, that it is the function of signs that makes reflective thinking possible. Contains the following chapters: (1) "Beyond a Literal Reading"; (2) "Current Thinking on Critical Thinking"; (3) "The Roots of a Semiotic Perspective: C. S. Peirce and Semiosis"; (4) "Critical Thinking in Semiotic Perspective: A Process of Inquiry"; (5) "The Practice of Critical Thinking"; and (6) "Classroom Contexts for Critical Thinking."

Smith, Carl B. "Prompting Critical Thinking (ERIC/RCS)," *Reading Teacher,* v42 n6 p424 Feb 1989.

Discusses how teachers can provide classroom experiences that lead young readers to react critically to what they read. Suggests ways to focus attention and target evaluative responses to literature.

Thomas, Ruth G., ed. *Higher Order Thinking: Definition, Meaning and Instructional Approaches.* Home Economics Education Association, Washington, DC, 1987. 79p. [ED 287 998; not available from EDRS]

Presents current thinking, research, and practice in the area of higher order thinking skills with home economics educators, including teachers, supervisors, and teacher educators.

Tierney, Robert J.; and others. "The Effects of Reading and Writing upon Thinking Critically," *Reading Research Quarterly,* v24 n2 p134-73 Spr 1989.

Examines whether writing in combination with reading prompts more critical thinking than either activity alone, or either activity combined with questions or with a knowledge activation activity. Finds that students who both wrote and read made more revisions (prompted by more critical thinking) than students in any other treatment group.

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